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ABSTRACT

Chicanos have been limited in their educational opportunities, as evidenced by their underrepresentation in occupations and professions requiring extended education. It is proposed that intelligence testing is one part of an educational ideology that ascribes the Chicano's unequal educational existence to the group's inability to function competently within the Anglo-American institutional environment. This paper discusses intelligence testing as an educational activity, its implicit assumptions, and the educational and social policy implications of intelligence testing for Chicanos. The hereditarian and environmentalist positions are described. The hereditarian position places greater responsibility on the person for his level of inequality, whereas, the environmentalist position employs the aggregation of personal inequality by social group to support structured levels of social inequality. The simple observation that intelligence test scores and performance in school and at work are closely associated has too often prompted intelligence test experts to conclude that the benefits of education and occupation are distributed on the basis of intelligence. On the contrary, it has been demonstrated that one's socioeconomic origin has a closer association with economic and occupational success than level of intelligence. (Author/RL)

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INTELLIGENCE TESTING, EDUCATION, AND CHICANOS: AN ESSAY IN SOCIAL INEQUALITY

by

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At various stages in its development, this essay has benefited from the comments, and reviews of John Meyer, Ralph Guzman, Saul Sanchez, Albert Mata, and several of the ERIC Clearinghouse staff. Responsibility for this work, however, remains my own.

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Table of Contents

		Page
I	The Educational System	4
II	Intelligence Testing in Educational Activity	7
	Implicit Assumptions	9
	Educational and Social Policy Implications	13
	The Camps	18
	The Political Dimension	20
	Educational Implications	22
III	Equality in Education	23
IV	Chicanos and Intelligence Tests	26
	Approaches to the Problem	27
	Some Implicit Assumptions	29
	Alternative Approaches	31
V	Educational Overview	34
	Inequality and the Chicano	35
VI	Conclusion	39

Pyramidal magic - the magic of hierarchy - is inevitable in social relations, and it is not the individual, but his hierarchical office which contains and generates the charisma of a hierarchical order. Thus, when we hear slogans of "complete equality" or "equal shares in the land," we may be sure that in the new system in which all are to be equal, some social offices will soon develop which will be "more equal than others." Thus, the principle of equality is used to sustain inequality.

Hugh Dalziel Duncan,
Communication and Social Order,
1962, p. 122.

With an estimated constituency of 6.5 to 8 million people, Chicanos, like other nonwhite minorities in the United States, find themselves at a heavy political (Taebel, 1978; Garcia, 1977), economic (Table 1), and educational (Table 2) disadvantage with respect to the white majority. As one of the major target populations for the provision of equal educational opportunity (National Institute of Education, 1977), intelligence testing becomes an important concern for the Chicano community because of its use in the public schools as a major instrument for the allocation of educational opportunity (Cleary, et al., 1975; Goslin & Glass, 1967; Karier, 1972; Keogh & Barkett, 1978).

Table 1

Average Annual Income for

Chicano Families

Family Income	Percent
less than $4,000	12.5
$4,000 to $6,999	17.1
$7,000 to $9,999	18.6
$10,000 to $14,999	22.6
$15,000 to $19,999	15.5
$20,000 to $24,999	7.3
$25,000 or more	6.3

Median Income = $10,259

Source: Social Indicators of Equality for Minorities and Women, United States Commission on Civil Rights, 1978.)

Table 2

Comparison of the Educational Attainment of

Chicanos and Anglos

	Years of School Completed			
	Less than 5 years		4 years of high school or more	
Age	Chicanos	Anglos	Chicanos	Anglos
25 - 29	7.6%	0.6%	51.3%	87.1%
30 - 34	12.6%	0.6%	44.1%	84.4%
35 - 44	15.9%	1.1%	37.2%	76.9%
45 - 64	34.3%	2.7%	21.4%	62.7%
65 - Over	65.4%	8.7%	7.1%	38.7%

(Source: U.S. Department of Commerce, Bureau of the Census, Persons of Spanish Origin in the United States: March 1978, Current Population Reports, Series P-20, No. 339, (1979).

That Chicanos have been limited in their educational opportunities and in the enjoyment of the "fruits of American society" is evident in their underrepresentation in occupations (U.S. Commission on Civil Rights 1975; 1978) and professions (Romero, 1977; Madrid-Barela, et al., 1976; Arce, 1976, 1978) requiring extended educationl. For example, in 1977, 60 percent of employed Chicanos were working in

[1]The extent of these disadvantages has been discussed at some length in the educational literature. In particular, see the following: Sanchez (1972), Roos (1977), Casso & Roman (1976), TenHouten, et al. (1971), Guerra, et al. (1969), Salazar (1970), Anderson & Johnson (1971), Blair (1973), Thornburg & Grinder (1975).

blue-collar occupations compared with 45 percent of the employed white male population; and 20 percent of employed Chicanos were working in white-collar jobs compared with 40 percent of the employed white male population.[2] In addition, a report on the quality of education for Chicanos prepared by the United States Commission on Civil Rights (1974) shows that less than 11 percent of the total professional staff in state departments of education for the five southwestern states is Chicano, even though nearly one of every five children in the public schools is Chicano.

Our primary intent in this essay is not to depict intelligence testing as a causal agent for the Chicano's unequal educational existence, because this particular part of his existence is also affected by socio-structural factors that have been historically determined. Rather, we will propose that intelligence testing is part of an educational ideology that ascribes the Chicano's unequal educational existence to the group's inability to function competently within the Anglo-American institutional environment.

For instance, given the degree to which intelligence tests measure (a) knowledge of the dominant society's sociocultural patterns and (b) involvement with the dominant society's principal social institutions,

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[2] See the following: Persons of Spanish Origin in the United States: March 1977, Current Population Reports, Population Characteristic, Series P-20, No. 317, (U.S. Department of Commerce, Bureau of the Census); and Social Indicators of Equality for Minorities and Women, United States Commission on Civil Rights, 1978).

Chicanos' chances of performing poorly on such tests are quite high because social and historical forces have limited their existence to social environments separate from the mainstream of the dominant society (Barrera, 1979; Light & Smith, 1969). Thus, our concern is with the description of intelligence testing as a social activity in the public school used for determining educational opportunity, and with the ideological use of intelligence testing for determining the Chicanos' quality of life.

THE EDUCATIONAL SYSTEM

Perhaps the one universal function of all educational systems is the transmission and maintenance of cultural patterns, with the specific objective of instilling in the individual a "social consciousness" reflective and supportive of the culture's institutional structure (Freire, 1970). It has been proposed that the degree of support one demonstrates for dominant social institutions is dependent on one's educational experience. That is, one's level of institutional dependence reflects the political socialization one undergoes within the educational system, and one's level of commitment to the institutional structure is, in turn, an indicator of one's citizenship or membership status (Meyer & Rubinson, 1975; Boli-Bennett & Meyer, 1978; Ziegler & Peak, 1970).

Maintenance of cultural patterns provides for continuity in the accumulation of knowledge in each area of social life and for the aggregation of such knowledge into a society's cultural heritage.

In an institutional environment, education becomes a functional prerequisite to formalizing relationships with those institutions responsible for the legitimation of social behavior. One of the purposes in this essay will be to show that the introduction of intelligence testing into the educational system resulted in the development of a schooling industry aimed at formalizing a person's relationship to and maintaining an institutional environment rooted in inequality (Boulding, 1972; 1976).

The educational system contributes to the maintenance of inequality because it is the transmitter and translator of knowledge by relevant audience (Figure 1). The term relevant audience refers to the aggregations of persons that differ in the type of knowledge they receive. Since persons differ in the type of knowledge they receive, we can assume that the opportunity for expressing this knowledge will also differ. In this way, the educational system maintains the transmission of audience-specific knowledge, and structures opportunities for its specific expression. As Blau and Duncan (1967) have demonstrated, family background (audience membership) affects the education one will receive (audience-specific) and the first job one will obtain (specific expression).[3] Thus, the educational systems ensure that persons are only provided knowledge and those opportunities for its expression that are audience-specific.

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[3]Historically, because education has been preoccupied with the coordination of audience with role-knowledge and corresponding opportunity structures, it has not been a successful intervention strategy for the upward mobility of children (e.g., a change in audience membership) from poor families (Bowles & Gintis, 1973; Katz, 1971; Spring, 1976). Quite the opposite has occurred in that public schools have served to deprive poor children of a quality education (Carnoy, 1974; Katz, 1970), by crystallizing audience differences (Keniston, 1977; Thurow, 1976).

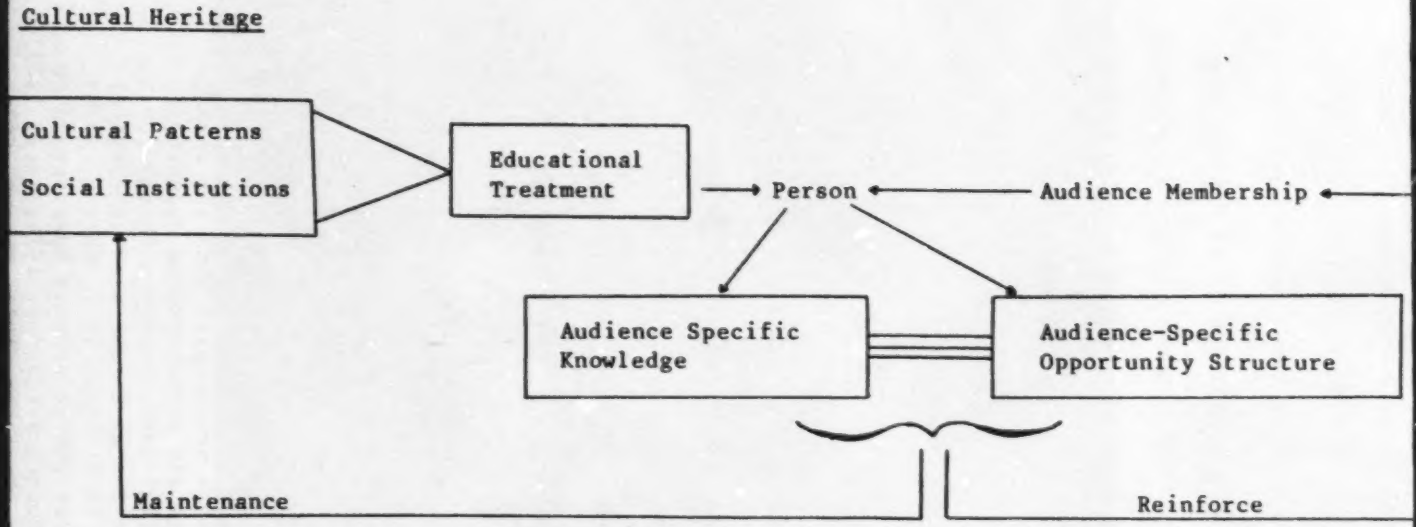

Figure 1. Interaction of Person, Education, and Audience

The effectiveness of the educational system in maintaining a system of audience-specific knowledge transmission is largely dependent on its ability to control individuals (Goslin, 1965; Callahan, 1962). That the educational system maintains a structured arrangement of audiences demonstrates its global control over the individual. However, at the institutional level, social control is exercised through the teacher who, as an agent from the adult society, is responsible for ensuring that students will accept those expectations specific to their audience membership. Students will, in turn, respond to those expectations because as members of the same audience, they will perceive each other as equal within a general activity. Consequently, social control over the student is dependent on the student's acceptance of a general body of expectations that defines him, and others like him, in a shared activity (Parson, 1959).

INTELLIGENCE TESTING IN EDUCATIONAL ACTIVITY

With its origin in America's response to the military's need to rationalize and standardize manpower during World War I, the intelligence test quickly became the "great" psychological experiment destined to differentiate men within disciplined and highly stratified social organizations (Spring, 1972). Strong supporters of the intelligence test, such as Robert Yerkes, were confident that the lesson in human engineering taught by the war would allow for the entrance of intelligence testing ". . . directly and effectively into our civil institutions and activities" (Yoakum & Yerkes, 1920:viii).

During this period of history, the institutional environment required that social action respond to external demands brought about by increased socialization (assuming a corporate work role) rather than internal demands (personal satisfaction). There was also an increasing demand for specialization in social activity and the growing belief that what worked for one institution would work for another. It was in the midst of all this social realignment that the intelligence test was incorporated into educational activity as an instrument aimed at formalizing a person's acceptance of external institutional demands. As a result, education was transformed from a process concerned with the acquisition of knowledge into a strategy for adapting the person to his environment (Strong, 1919).

Despite the fact that intelligence testing has become a legitimate part of educational activity, the rationale behind such testing practices is not generally known (McNemar, 1964; Levine, 1976; Cronbach, 1971; Riegle, 1977; White, 1975). Sorgen (1973) has suggested that because intelligence testing allows for the grouping of students by ability, it is presented as a necessary component in the school's blueprint for effective and efficient teaching. Similarly, Karier (1972) has suggested that because corporate interests, such as those of Rockfeller and Carnegie, were instrumental in the initial financing of the testing movement, the push to educate individuals to assume a corporate identity resulted in intelligence testing becoming a corporate enterprise essential

to education's need for continuous measurement and accountability.[4] Consequently, intelligence testing has come to be regarded as an effective educational vehicle for facilitating the efficient transfer of individuals from educational to occupational roles. In brief, justification for administering intelligence tests to every youngster who goes to school is usually provided by rationalizations that stress the importance of testing in an educational technology's attempt to provide quality education (Benson, 1977; Bauernfeind, 1971; Brookover, et al., 1974). Perhaps one way to examine this issue is to look at the influence exerted by the implicit assumptions in intelligence testing on twentieth-century ideas and the role of education in a democratic society.

Implicit Assumptions

From its beginning, the movement behind the intelligence test has been preoccupied with the premise that mental capacity is inherited; that is, the belief that intelligence tests measure something innate, something that is fixed at the moment of a person's conception and persists over

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[4]Aside from the educational reasons for intelligence testing in the school, Marks (1976-1977) suggests that the concept of individual difference underlying the intelligence test was used by psychology as an ideology in the legitimation of its practice:

> At the turn of the 20th century, psychology was struggling for survival. It had neither a respectable scientific reputation nor a salable professional product. From this unenviable condition, psychology rose to scientific and professional prominence within 25 years. One reason for this phenomenal rise was the discovery of a scientific measurement of mental differences: the intelligence test (p. 4).

time. The significant role this premise played in the intelligence testing movement can be observed in the rapid growth of a eugenics movement led by some of the principal intelligence investigators (Rose & Rose, 1978), such as H. H. Goddard and Lewis Terman,[5] that was principally aimed at guarding society from the ". . . menace of the feebleminded" (Terman, 1914).

For instance, regarding the development of intelligence measures, implicit in Terman's (1923) theoretical strategy that questions on the Stanford-Binet intelligence test were designed to measure the progressive difficulty in performing tasks necessary for achievement in ascending the hierarchical occupational structure was the assumption that people were at a particular occupational level because of heredity and social environment. Using the observation that close to 50 percent of the fathers of gifted children in his studies of genius belonged to professional groups, while none belonged to unskilled groups, Terman (1925)

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[5]Two populations that were unfortunate victims of this movement, specifically concerned with the maintenance of social order by sterilizing "undesirables," were blacks and immigrants from southern and southwestern Europe. For example, according to Popenoe (1930), in California, where only 20 percent of the foreign-born population and 1.5 percent of the black population were over 21 years of age in 1930, 30 percent of the men and 31 percent of the women sterilized were foreign-born, while 4 percent of the total number were black.

It's interesting to note that the attempt to demonstrate that whites are superior to blacks in intelligence goes as far back as the 1890s. For example, psychologist R. M. Bache tried to measure the quickness of sensory perception between 12 whites and 11 blacks. Despite the result that blacks had faster reaction times than whites, Bache proclaimed that whites were the superior group because "they belonged to a more deliberate and reflective race..." than blacks (quoted in Gossett, 1963:364).

came to promote the general principle that social stratification corresponds to native ability. That is, because intelligence levels were closely associated with the stratification system, biology came to be seen as the agent fostering this relationship (Kamin, 1975).

This central premise in the measurement of intelligence introduced a clear pessimism in the United States concerning the potential for improving individual abilities through education. Arguing that the children of working-class parents were simply unable, and could not learn, to compete, Terman (1925; 1926:96) came to believe that it was "of greater value to discover a single gifted child than to train a thousand dullards to the limits of their educability or to prevent the birth of a thousand feebleminded." Similarly, this pessimism was expressed in 1940 by Edward L. Thorndike as: "if one has imagined that the genes of a dull normal. . . develop into a mind able to graduate from a reputable law school, he will be disappointed to learn that differences in home life and training probably cause less than a fifth of the variation among individuals in I.Q.."

More recently, Arthur Jensen (1969) has employed a similar position in his attack on compensatory education programs, such as Head Start, by arguing that such programs can not have lasting effects on children's intelligence scores because they can do little more than promote maximum development of the kind of intelligence a person is born with. As a result, Jensen suggests that because it is impossible to change cognitive patterns, different educational goals should be established for different groups of children. However, Jensen's position ignores the fact that

while compensatory education programs have not been effective in raising intelligence scores, they have been partly effective, but by no means successful, in increasing the child's ability to do well in school (Shea, 1977).

Serious questions regarding the assumptions of American democracy are raised by this pessimistic view of education. The premise that mental capacity is inherited has come to mean that people are not born equal, that it is impossible to make them equal, and that the most education can do is to enhance individual differences by tailoring itself to the needs of the child.[6] As a result, education is not a vehicle for attaining an equitable relationship within the social system, but rather a structure inhibiting individuals from adopting a dynamic model of personality development aimed at modifying one's lifestyle (March, 1972). What this, in turn, predicts is that the most an individual can accomplish through education is to learn how to equalize his inequality as much as possible.

From a social system's approach then, we can observe that equality has become a function of structural inequality in that educational systems are perceived as "equal" to the degree that patterns of social inequality are maintained, and, conversely, educational systems are "unequal" to the degree that patterns of social inequality are either

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[6]In this regard, Bowles (1972:45) has written that: "the older democratic ideology of the common school - that the same curriculum should be offered to all children - gave way to the 'progressive' insistence that education should be tailored to the 'needs of the child'."

rapidly changing or nonexistent. Thus, from the very beginning in the measurement of intelligence, the possibility of a strictly egalitarian democracy was not forged, and democracy came to be defined not as rule by the people but rather as rule by the intelligent: "The argument for democracy is not that it gives power to men without distinction, but that it gives greater freedom for ability and character to attain power" (Thorndike, 1920:235).

While those who have advanced the assumptions and applications of intelligence testing have persistently denied the possibility of using education as a reform mechanism to help make all men capable of equal participation in a democratic society, they have not rejected the possibility of creating the "good society" in the twentieth century (DuBois, 1972). However, if American educational institutions are principally designed to distort personal and social development by limiting their expression to those instances largely determined by external conditions (audience membership), then the "good society" will consist not of individuals performing meaningful and equitable actions, but rather of an alienated and stratified labor force (Bowles & Gintis, 1976).

Educational and Social Policy Implications

The redefinition of democracy that emerged early in the testing movement, as a social system where people would be channeled to their appropriate stations in life based on their respective levels of native intelligence, became a moral ideology for education: "What an intelligent father desires for his own son, an intelligent democracy desires and should provide for its children - an education for each according to his

"capacity" (Pritchett quoted in Marks, 1976-77:8). Similarly, Arthur Jensen (1969:15) has stated: "We have to face it: the assortment of persons into occupational roles simply is not 'fair' in any absolute sense. The best we can hope for is that true merit, given equality of opportunity, act as the basis for the natural sorting process." However, if "true merit" is simply a reflection of the real world of economic and social privilege, and intelligence tests reflect socioeconomic biases, then equality of educational opportunity becomes a mechanism for controlling movement into and within the American system of social stratification. As such, Jensen is well in support of Terman's initial position that when it comes to education, all have a chance to succeed; however, merit alone is to be rewarded. What is ironic, however, is simply that merit corresponds to one's position in the stratificational system of society.

Interpreting "equality" in education as providing for individual differences (individual abilities and interests) was also consistent with the growth of an American meritocracy; a meritocracy supportive of equality of opportunity for all and impartial treatment for everyone. One way of ensuring the implementation of these two principles in everyday life was through the use of intelligence tests as objective and impartial procedures supported by everyone. Education, as a result, became a "schooling industry" responsible for selecting individuals for and assigning them to differentiated education and various positions in society (Henning, 1969; Kazamias, 1961). The concept of "differential intelligence" now justified the selection of particular students for differentiated academic, vocational, or other programs. In short,

> The development of tests and measurements designed to measure presumed differences of ability provided a means for differentiation on presumed objective and universalistic criteria rather than on such factors as wealth or ethnic identity. The apparent unfairness of selection, grouping, and tracking procedures on the basis of social class background was objectified and justified by the educational testing program. Equality of opportunity was provided for . . . by a program that would fit a lower-class child for a lower-class position as the upper-class child was fitted for an upper-class position (Brookover, et al., 1974:172).

Equality was thus manifest in the acceptance of one's social position as that which one can fill best, and the belief in a meritocracy facilitated one's acceptance of the situation, that is, the acceptance of one's fate.

The emergent ideology of "individual differences" implied that equal educational opportunity was for individuals the best of two possible worlds: equal education, the principle that all children should receive a common education regardless of intellectual ability, and equal opportunity, educational opportunity commensurate with one's ability as measured by the intelligence tests (Ziegler & Trickett, 1978). The educational technology of measurement and classification made possible by the incorporation of the intelligence test into educational activity was instrumental in differentiating educational programs that would, in turn, decrease the possibility of providing equal educational opportunity and equal access to positions in the stratification system. Thus, equal educational opportunity does not mean that schools should, or even could,

be responsible for improving the intellectual abilities of various portions of the American population.[7]

In summary, the emergent ideology of "individual differences" resulted in educational and social policy[8] aimed at providing for human diversity. Implicit within the resulting educational policy were the assumptions that individual differences are important in policy decisions, that appropriate measures are available for detecting differences, and that adequate programs can be developed to meet these needs. For education, these assumptions were instrumental in fabricating the myth that different educational programs enhance individual freedom and opportunity. However, the role of intelligence testing in the ideology of "individual differences" provided for continuity in the maintenance of unequal educational opportunity structures for certain populations, which, in turn, assured them an unequal relationship with the dominant social institutions.

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[7]The ideology of "individual differences" was extremely important from a political standpoint because it socialized people to view social and economic inequality as <u>individual</u> deprivations rather than as <u>group</u> deprivations. This practically ensured that those populations suffering most from this ideology would not perceive their situation as one not of their own choosing and would not perceive it as susceptible to change through collective political action. For some literature that looks at various aspects of this phenomenon see the following: Inglehart, 1976; Goodenow, 1975; Ravitch, 1976; Cross, et al., 1978; Publisi, 1974.

[8]Though we have not elaborated on this issue, findings of intelligence testing also came to be used as a rationale for immigration exclusion. Specifically, results showing that the "old" Americans of Nordic stock were intellectually superior to the "new" Americans of Alpine or Mediterranean stock were instrumental in the enactment of the Immigration Act of 1924, which clearly discriminated against the new immigrants (e.g., Marks, 1975).

The 60s were a trying decade for the intelligence test and its advocates. The social and political climate that came to characterize the 60s, largely the product of antiwar demonstrations and civil rights movements, challenged the American consciousness by demonstrating that the social conditions people found themselves in were not solely the result of individual effort but also the result of external factors unrelated to personal qualities.[9] The effects of this period on the intelligence testing movement may be observed in the change in thinking regarding the movement. On the one hand, some persons come to argue that intelligence is an inherited trait, while on the other, it was argued that intelligence is the product of environmental conditions.

There are many things that can be said about the hereditarian versus environmentalist position without drifting away from our primary task. The general view within intelligence testing circles is that all measured mental abilities are a function of both genetic and environmental variables, the contribution of neither of these being zero. However, that is not intended to imply that two separate camps do not exist. In the following pages, both sides of the controversey will be outlined, not as a treatise in genetic psychology, but as a discussion of the dimensions relevant to the concerns of this paper.

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[9] As early as the 1930s and 1940s, the notion of equal opportunity in the enjoyment of the fruits American society offers was directly challenged by sociological studies illustrating the significant effect of social stratification on the distribution of opportunity and wealth (for example, see: Lynd & Lynd, 1929, 1937; Warner & Lunt, 1941; Warner, et al., 1949; Hollingshead, 1949). One may venture to state that the historical conditions were set for what was later to be realized as the "politics of turmoil" in the 1960s.

The Camps

Intelligence investigators such as Herrnstein (1973), Jensen (1969, 1972), and Eysenck (1971) argue that intelligence is dependent on genetic factors. Implicit in their argument is the assumption that innate potential exists before the individual interacts with the environment and establishes upper limits for what the individual can achieve in school and later life. Perhaps the individual most often associated with the hereditarian position is Arthur Jensen--in particular, his 1969 paper in which his findings demonstrate the persistence of differences in intelligence test scores between blacks and whites. What is most significant in his 1969 paper is that it was used by some members of the research community to argue that blacks are genetically inferior to whites.[10]

While Jensen does argue that the critical issue is not whether a particular characteristic is due to either heredity or environment but, rather, what proportion of the characteristic is due to each factor, he does promote the observation that the environmental influence is much smaller than the genetic influence:

> To be more specific, all major facts are comprehended quite well by the hypothesis that somewhere between one-half and three-fourths of the average IQ difference... is attributable to genetic factors and the remainder to environmental factors and their interactions with the genetic differences (1969:116).

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[10] Summary appraisals of Jensen's 1969 paper and his findings are found in the essays by Jerome S. Kagan, J. McV. Hunt, James F. Crow, Carl Bereiter, David Elkind, Lee J. Cronbach, and William F. Brazziel, in Environment, Heredity, and Intelligence (1969). For other reviews see: Light & Smith (1969), Sanday (1972), Green (1976a, 1976b, 1976c, 1977), Kohl (1976).

This is in sharp contrast with Kamin's (1974) argument that heredity has zero effects on intelligence.

On the other hand, the environmentalist position refutes the hereditarian argument by proposing that intelligence is the result of cumulative interactions with the social and/or cultural environment. The environment is equated with social class (for example, audience membership), with intellectual performance becoming a reflection of one's social class membership. The connotation of intelligence than changes from one in which it is the product of internal characteristics (genetic) to one in which it reflects how well one internalizes external characteristics (audience variables). Thus, differences in intelligence test results are not the result of genetic factors but of social class. For instance, by assuming that success or failure in school is an individual responsibility, one largely dictated by level of intelligence, the hereditarian position diffuses the role of class identity. However, the environmentalist position acknowledges the importance of class membership in the allocation of social roles and success, so that opportunity is not a reflection of individual ability but of opportunity accorded to one's class membership.

In summary then, the hereditarian position argues that differences in intelligence are the result of genetic factors, whereas the environmentalist argues that such differences are the result of restricted exposure to mainstream sociocultural elements associated with the expression of intelligence (Sanday, 1972; Loehlin, et al., 1975; Scarr-Salapatek, 1971a, 1971b). Interpreting this in another manner, where the

hereditarian position argues that homogeneity in measured intelligence for any one group of persons is the product of inbreeding, the environmentalist position argues that such homogeneity simply reflects the group's existence in an environment uniform in those components important in the measurement of intelligence.

The Political Dimension

Some writers (Carnoy, 1974; Bowles & Gintis, 1976) have argued that the ideology of individual differences underlying the early beginnings of the intelligence test is a useful political device for attaining some level of social control in educational areas. Since, from the beginning, intelligence test results were assumed to be an objective reflection of a person's "own limitations," responsibility for individual productivity was placed upon the person and away from the structure and organization of the economy. This general recognition of the intelligence test aided in the development of a political and educational climate that made possible the institutionalization of a meritocracy designed to ensure that only those with the "correct" characteristics got the highest positions in society. To enhance the idea of a meritocracy, the social climate of America presented itself as ". . . the land of opportunity, where the best excelled and the inferior found themselves in the lowest status (and paid) occupation" (Carnoy, 1974:253).

From an everyday level of political understanding, the hereditarian position strengthens society's rationale for the maintenance of structured social inequality. The hereditarian position that differences in intelligence are largely the result of genetic factors implies that some types

of people will be more intelligent than others and provides some support for the old belief that ". . . social classes sort themselves out on the basis of innate individual capacity to cope successfully in the social environment" (Bowles & Gintis, 1976:118). For example, the observation that racial and ethnic minorities are overly represented in environments limited in educational and occupational opportunity, or in social classes low in prestige and social power, is too often used by the hereditarian to argue that minority-group members are in these situations because they lack the intellectual ability to function in another area of social life. Thus, the hereditarian position would have one believe that social inequality is related to intelligence--low levels of social status are associated with a low degree of intelligence, while high levels of social status are associated with a high level of intelligence.

In contrast to the hereditarian position, the environmentalist's contention that differences in intelligence are the result of social class membership implies that knowledge is socially determined. Assuming that intelligence tests are reliable measures of knowledge, and that social classes are hierarchically organized, the differences in intelligence imply that all types of knowledge, or knowledge as the product of social class, do not have equal validity. Differences in intelligence, then, are going to be reflective of the unequal relationships people occupy in the social and cultural institutions (Hodges, 1976). It has been suggested (Rose & Rose, 1978) that the differential performance of social groups on intelligence tests is merely the consequence of designing a test that reflects social expectations in a class-stratified educational system.

From a political point of view then, the environmental position challenges the assumption that a true meritocracy exists in America where selection is based solely on merit and ability is rewarded. By arguing that selection is largely the result of cultural background, personal contacts, favoritism, and so on, the environmentalist position describes selection as a process whereby ". . . some with ability get substantial rewards, while many with equal ability are left in the dust, and others with less ability may on numerous occasions attain even higher rewards" (Miller & Ratner, 1972:13).

Educational Implications

What implications does each of these positions have for education? On the one hand, the hereditarian argument implies that an understanding of the way hereditary factors influence intelligence is a prerequisite to developing educational programs for children with low scores on intelligence tests. For instance, Eysenck (1971:42) maintains that a high level of intelligence is essential for academic success and that it is unreasonable to disregard the importance of this fact:

> It makes no sense to reject the very notion of such abilities as being important...and at the same time demand access to institutions closely geared to the view that such abilities are absolutely fundamental to successful study.

Accordingly, Herrnstein (1973) describes a "hereditary meritocracy" as one where social stratification is based on innate differences, and where education is instrumental in maintaining a caste society in which intelligence, and its corresponding level of social advantage, is transmitted from one generation to the next. Consequently, mobility within

the educational system becomes a reflection of mobility in the social stratification system:

> . . . schooling has contributed to the reproduction of the social relations of production largely through the correspondence between school and class structure (Bowles & Gintis, 1976:130).

On the other hand, the environmentalist position that educational systems differentiate children on class-associated information implies that education is a legitimating agency for social hierarchies. The educational system is portrayed as the agency primarily responsible for socializing persons to perceive socioeconomic structures as objectively selecting persons for high status occupations and incomes on the basis of school performance. For example, the environmentalist position maintains that the knowledge and experiences of the lower classes, and those of the middle and upper classes, are so disparate that for lower-class children to succeed in school they must be exposed to a vast program of cultural remediation. However, success in school activity is not so much the goal as is the incorporation of children into an environment of middle-class institutions (Carnoy 1974:233-269). In the end, education is simply an instrument for the maintenance of middle-class culture.

EQUALITY IN EDUCATION

From its very beginning, American public education was conceptualized as a political activity responsible for building and maintaining a democratic republic (Cremin, 1976). Maintenance of a democratic republic was to be accomplished through the public schools by socializing children to the practical meaning of social equality in the form of a free and

public education. Equality of educational opportunity[11] thus came to acquire the following characteristics (Coleman, 1966; Clark, 1976):

a. provision of a free education up to a level that constituted the principal entry point into the labor force,

b. development of and instruction in a common curriculum for all children,

c. providing equality within a given locality, since local taxes provided the source of support for schools.

What implications, then, can we draw from the hereditarian and environmentalist position regarding equality in education?

The principal argument for the hereditarian position that intelligence is dependent on genetic factors implies that people are not born equal and the attempts of educational programs to make people equal are futile. The most educational programs can do is ensure that people will equalize their respective levels of social inequality. At the social system level, equality will be present only if clear-cut patterns of differential opportunity structures, segmented by audience membership, are maintained by the educational system. The role of equality in education is best described for the hereditarian position by Herrnstein (1973:64) as the promotion of an egalitarian society based on inborn traits:

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[11] No attempt to summarize the literature in the area of equal educational opportunity will be attempted. To do so would lead us away from our principal topic. The interested reader, however, is referred to the following sources in the area: Coleman et al. (1966, 1975), Mosteller & Moynihan (1972), Feinberg (1975), Clark (1976), Shanks (1970), Thurow (1972), Sorenson (1971), Kurland (1968), Yudof (1973), Blake (1973), Carlson (1972), Cordasco (1973a, 1973b), Glickstein (1977), Benson (1977), Brown (1976), Francis (1977), Levin (1975), Campbell (1973), and Raggatt (1976).

> Greater wealth, health, freedom, fairness and educational opportunity are not going to give us the egalitarian society for our philosophical heritage. It will instead give us a society sharply graduated, with ever greater innate separation between the top and bottom, and ever more semiformity within families as far as inherited abilities are concerned.

In comparison, the principal argument in the environmentalist position, that education is a reflection of class differences, implies that equality in education can only occur by means of a vast program of compensation requiring all persons to experience the best and most successful educational and social conditions; that is, a program of compensation that would alter the configuration of institutions that debases the self-concept and group identify of lower-class individuals (Baratz & Baratz, 1970; Havighurst, 1970; Coleman, 1966). There would, therefore, be no change in the social organization of people and things but a restructuring of that configuration of institutions that is least likely to change.

Both the hereditarian and environmentalist positions raise questions concerning the relative cost in attaining equality. The hereditarian position would have us believe that equality cannot be achieved, and that the most one can do is to optimize one's level of inequality. By comparison, the environmentalist position promotes equality only to the degree that lower-class members admit that their social environment is inferior, and that they are willing to adopt middle-class norms (Clark & Plotkin, 1972; Kelly & McConnochie, 1974). While it is clear that the hereditarian position places greater responsibility on the person for his level of inequality, the environmentalist position employs the aggregation

of personal inequality by social group to support structured levels of social inequality.

CHICANOS AND INTELLIGENCE TESTS

Since the relation between education, society, and Chicanos appears to be one of social accomodation rather than one directed at social reform, the question arises, "Where do Chicanos stand in the intelligence test area?" An investigation of this question may well serve as a guide for unraveling the various kinds of educational and occupational opportunities that would make for equal opportunity for the Chicano population. Such an investigation may also provide some insight regarding the frustration experienced by Chicanos when thinking about the American dream:

> When the Mexican American in the Southwest complains about having nightmares instead of the American dream, he's usually told: "Education is the answer, amigo. Get an education and your problems will be solved" (Salazar, 1970:53).

As early as the 1920s it was generally argued that when Chicanos were compared with their Anglo counterparts in the same school grade, they would be shown to be about 14 months behind in normal mental development (Sheldon, 1924). In a 1928 study by Garretson, it is reported that ". . . the native capacity, if we assume that intelligence quotients are indicative of native capacity, of the Mexican pupil is less than that of the American child" (p. 38). Similarly, in a 1932 study of school achievement for grades 2 through 8 in the Lower Rio Grande Valley of Texas, it was reported that the intelligence of Chicano school children was, on the average, one year below the average intelligence level of Anglo school children for the same age and grade (Manuel & Hughes,

1932). Much more recently, in the now famous study of equal educational opportunity by James Coleman (1966), it is reported that not only are the mental abilities of Chicano children below those of white children, but that the difference grows larger as the children grow older and move through school grades.[12]

Were one to do a decade-by-decade review of the literature discussing Chicanos and intelligence testing, such as the one presented by Padilla (1979), one could make the observation that mean group differences in intelligence test results for Chicanos and Anglos have been used to imply that the average level of intelligence in the Chicano population is significantly below that in the Anglo population. Despite the very early criticism of such studies and their interpretations by Sanchez (1932a, 1932b, 1934), regarding their failure to control for cultural and demographic differences, we still find that group mean differences in intelligence test results for Chicanos and Anglos are assumed to reflect innate characteristics in each group. From a social policy perspective, what is important about studies focusing on group mean differences is that they become a vehicle for the reinforcement of the hierarchical arrangement of Chicano and Anglo school children.

Approaches to the Problem

Various approaches have been employed for the testing of the Chicano child's intellectual ability. A rather standard approach has been to

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[12] Possibly the most extensive and elaborate review of this literature can be found in Padilla & Ruiz (1973:65-94). Also see: Hernandez (1973), Sanchez (1932), TenHouten et al. (1971), Cauce et al. (1976), Samuda (1973, 1975).

compare the intelligence test results of Chicano children with those of Anglo children. Despite the question of comparability in studies employing this approach (Goldman & Hartig, 1976; Mercer, 1973; Henderson & Rankin, 1973; Garcia, 1975), results generally show that Chicano children obtain lower intelligence test results than Anglo children (Holland, 1960; Kidd, 1962; Gerken, 1978).

Another approach employed attempts to control for the intervening influence of linguistic background by comparing the performance of Chicano children on the English and Spanish versions of the same intelligence test.[13] Results from studies employing this approach generally show that Chicano school children attain higher scores on the Spanish than on the English version of the test (Zirkel, 1972; Mitchell, 1937; Mahakian, 1939; Gimon, et al., 1975). Some research has even shown that Chicano children who have been placed in classrooms for the educable mentally retarded obtain higher scores on the Spanish version than on the English version of the test (Chandler & Plakos, 1969, 1970), with many of these children also performing above the cutoff point for special class placement (Mercer, 1970, 1971, 1972, 1977).

A third approach compares the results obtained on verbal and nonverbal intelligence tests. In an early study using this approach, Shotwell (1945) compared the performance of Mexican and American "mental defectives" on verbal (Stanford-Binet) and nonverbal (Arthur Performance Scale)

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[13]For critical studies of this approach see the following: Palmer & Gaffney (1972), Keston & Jimenez (1954), Swanson & DeBlassie (1971), Thomas (1977).

tests of intelligence. Both groups scored higher on the nonverbal test, with the Mexican group mean being 22 points higher than the American group mean. Shotwell (1945:448) explained the higher Mexican group mean by stating: "It may be that Mexicans of moron or borderline grade of intelligence have a special aptness along manual lines that is not found in Americans who are similarly retarded mentally." In general, results from studies employing this approach show that Chicano school children perform significantly better on nonverbal than on verbal measures of intelligence (Mercer & Smith, 1972; Christiansen & Livermore, 1970; Silverstein, et al., 1962; Philippus, 1967).

Some Implicit Assumptions

Before undertaking the "scientific" description and explanation of social phenomena, assumptions must be made about the nature of what is to be described and explained (Bandura, 1974; Belth, 1977). These initial assumptions are necessary for structuring the explanation of social phenomena in everyday language. The resultant structures of explanation, in turn, reflect the general patterns of everyday life. One may observe then that the explanation is a constant, but the interpretation of the explanation is what changes.

Regarding the administration of intelligence tests to Chicano children, two blanket assumptions are fundamental. On the one hand, it is assumed that the examiner is properly trained to administer the test regardless of the characteristics of the test takers (Newland, 1973; Robertson, 1980). However, Zirkel (1972) has suggested that special training is required for administering intelligence tests to

linguistically different learners. Bordie (1970) and Thomas et al. (1971) have shown that the test performance of Spanish-speaking children is affected by such examiner variables as level of bilingualism, ethnic group membership, and style of test administration. The findings of Phillips (1966) and Mycue (1968), and the review of effects of experimenter race by Sattler (1970), show that Anglo examiners tend to arouse anxiety in minority-group children, which impairs their performance on tests. Empirical evidence, therefore, does show that examiners are not totally neutral in the testing situation. The implicit assumption of examiner qualifications does not appear to hold, then, and the whole activity of testing the intelligence of Chicano children becomes questionable.

On the other hand, it is generally assumed that the subjects being tested have had exposure to comparable acculturation. For the Chicanos, intelligence tests are assumed to be culturally fair. In a 1972 study, Mercer set out to examine the reflection of middle-class achievement values in intelligence testing instruments by comparing the scores of Anglo and Chicano children, with the latter group being controlled on selected class and ethnic variables. Results of the study showed that: (a) the standard intelligence test was more predictive of behavioral skills for Anglos than for Chicanos, and (b) Chicano children whose families were least like the average Anglo family scored lowest on the intelligence test. Mercer's results, thus, do illustrate that intelligence tests are not culturally fair, and that results reflect one's level of acculturation to Anglo society.

The nonoperability of these two general assumptions when testing the intellectual ability of Chicanos implies that intelligence testing is an activity no longer grounded in rules employed when generalizing social phenomena. For instance, social phenomena are the same, or their referents are the same, if they satisfy all their underlying assumptions, explicit and implicit. Should any assumption not be satisfied, then one would not be referring to the same phenomenon. We are not excluding the issue of similiarity where a phenomenon might satisfy some of the assumptions in the generalizing of social phenomena. As such, it would have something in common with other phenomena with the same underlying assumptions, but it would not be the same.

If both Chicanos and Anglos satisfied the same body of assumptions employed in the conceptualization of intelligence, then its measurement would be a description of the same phenomenon for both groups. However, one group's inability to satisfy the body of assumptions would mean that the same phenomenon is not being measured across groups. We could say though, as is currently done, that we are measuring a similar attribute of the phenomenon. However, the difference in meaning between sameness and similarity causes either a loss for one group (low test result) or a gain by the other group (high test scores). Ironically, the lack of difference in intelligence test results for Chicanos and Anglos would not necessarily imply that one is operationally measuring the same phenomenon across groups.

Alternative Approaches

Current instruments for measuring intellectual ability have been criticized as inadequate for testing Chicanos because they do not sample from the

Chicano's linguistic and cultural experiences (Padilla & Garza, 1975). For instance, Smith (1974) has presented evidence that illustrates the nature of cultural bias in the Binet tests, and Mercer (1971), as already reviewed, has demonstrated the Anglo-centricity in standard measures of intellectual ability.

One factor contributing to the low intelligence test scores of Chicanos is language (Sanchez, 1934a; Vasquez, 1972; Gonzalez, 1974; Rincon, 1976; Cervantes, 1974; Angelis, 1977; Oller, 1977). To counter the intervening effects of language, standard measures of intellectual ability have either been translated into Spanish or the dialectical version of Spanish most familiar to the person being tested (Oliveira, 1972; Thomas, 1977; Levandowski, 1975). However, instead of creating a more equitable relationship between the Chicano and the measuring instrument, translated instruments have created a problem. For the most part, the root of the problem is that there has been more concern about facilitating the testing of Chicano children than on making the test more comprehensible to them. As a result, translated instruments are often filled with equivalent words that have different connotations for the child.

Despite the great lengths taken by intelligence researchers to eliminate further linguistic biases in intelligence measures, such biases will probably not be removed for at least two fundamental reasons. First, despite translation, test content will continue to be culture-bound in that test items will refer to concepts or life experiences in Anglo society. Second, while Chicanos may be familiar with some of those concepts or life experiences, they may not understand them in the context

of the test. (Garcia, 1972; Olmedo, 1977). For reasons such as these, some researchers believe that the development of a culture-fair intelligence test is extremely unlikely (Arvey, 1972).

Another factor contributing to the poor performance of Chicano children on intelligence tests is the sociocultural difference between Chicano and Anglo lifestyles. In an attempt to control for the intervening influence of this factor, Mercer (1976) has proposed a pluralistic approach in the evaluation of Chicano children based on the observation that sociocultural factors account for 30 percent of the variance in intelligence-test results among Chicanos when compared with Anglos. In brief, Mercer's approach views and compares each individual within his own sociocultural environment. Each individual is grouped by sociocultural environment on the basis of his family's characteristics along five dimensions:

a. Head of household has a white-collar job.

b. Family consists of five or fewer members.

c. Head of household is in a skilled or higher occupation.

d. Head of household was reared in an urban environment.

e. Head of household was reared in the United States.

Results from Mercer's work show that the more of these five sociocultural factors a Chicano possesses, the closer will be his or her approximation to Anglo society, and the higher will be his or her score on intelligence test measures.

EDUCATIONAL OVERVIEW

In the context of contemporary educational thinking, the measured difference in intelligence between the Chicano and Anglo child has come to mean that Chicanos perform poorly on measures used to predict academic success, and, therefore, they should be offered educational and occupational opportunities of less complexity, less abstraction, and that demand less intelligence. This line of educational thinking greatly restricts the Chicano's enjoyment of the benefits American society offers by narrowing their experiences of the larger world (Anderson, 1975).

As tools in an applied educational context, intelligence test results are interpreted to be objective measurements useful for the classification of students into high- and low-ability groups (Schafer, et al., 1970). This permits educators to justify the system of tracking students by arguing that the more academically able students should not be slowed down in their progress by the less academically able, and that the less bright will be more comfortable, and have greater self-esteem, in a group of children with similar abilities (Kirp, 1973; Sorgen, 1973; Comer, 1972; Beckwith, 1973).

The observation that the Chicanos' measured level of intelligence is below that of the general Anglo community has resulted in a restriction of educational opportunity by placing them in academic areas designed to limit academic growth and achievement. Perhaps the most serious and recognized restriction in the Chicanos' educational experience is due to

the fact that intelligence test results have been quite instrumental in the overclassification of Chicano children as mentally retarded (Casso, 1974). For example, Mercer (1971) has shown that in California, the number of Chicanos enrolled in classes for the mentally retarded is disproportionate to their numbers in the state population. Similarly, six years later, a report prepared by the California Advisory Committee to the United States Commission on Civil Rights (1977) reports that Chicanos continue to be grossly overrepresented in classes for the mentally retarded.

This brief look at the role intelligence test results play in the classification of students has raised some suggestions regarding the harmful effects of classification systems on the Chicano community. For it is not just a simple observation that Chicanos are overrepresented in classes for the mentally retarded, but a very complex social fact when one considers how such a classification lowers self-esteem. From an ideological perspective, this perpetuates and strengthens the Chicano's feeling of being resigned to his fate in an Anglo society and reinforces stereotypes held of him by the Anglo population.

Inequality and the Chicano

Regardless of difference in opinion about the causes of group variation on intelligence tests, the fact remains that average test results for the Chicano population are well below those of the Anglo population. For this reason, members of the Chicano population have a much smaller range of educational activity to choose from. In other words, they are much more likely to be tracked into less achievement-oriented activities

than Anglos. This issue becomes even more important when one considers that the prevailing policy attitude toward Chicanos is one of non-concern:

> We did not conquer most of the Mexican Americans. They came as immigrants, and why they should be "protected" more than other minorities is an interesting question (Glazer, 1978:74).

The question we can now ask is, "What role do intelligence test score results play, as part of an educational ideology, in the Chicano community's equality of life?". There are at least two possible answers. One is based on the observation that intelligence is a major determinant of the benefits a person is able to reap in society. For Chicanos, this implies that they are limited in the number or quality of benefits they derive from American society because, on the average, they are intellectually inferior.

The second possible answer rests upon the observation that group differences in intelligence test scores are a major justification for existing inequality (Jencks, 1980). Implicit in this observation is the social fact that the benefits of American society and the unequal distribution of income, jobs, power, prestige, and other benefits, are only justified but not caused by differences in intelligence. For Chicanos, this implies that they are not able to enjoy many of the benefits American society offers because they occupy social positions in environments characterized by low levels of prestige and power. However, their social condition is justified because it is interpreted to be a reflection of a low level of measured knowledge. Consequently, their

restricted enjoyment of American social benefits is justified by the attitude that they would not know how to enjoy more of those benefits.

When assessing any answer to the question of what role intelligence test results play in the maintenance of inequality, there are certain elements in the relationship between measured intelligence and school performance, and performance on the job, that cannot be denied. For example, intelligence test scores are said to be correlated with (a) occupational status and training time required to achieve certain skill levels (Legal, 1968; Cronbach, 1970; Ghiselli, 1966), (b) personality factors important for competing successfully in our society (Bowles & Nelson, 1974), and (c) grades in school (Goldman & Hewitt, 1975; Goldman & Widawski, 1976).

The difficulty, however, in accepting this relationship as a social fact is that it not only implies that intelligence test scores are related to performance in school and on the job, but that people are also selected for progressively higher levels of education and occupation on the basis of intelligence level. If it is true that intelligence test scores are a major factor in selecting people for higher levels of education, jobs, and social rewards, then it would be appropriate to say that Chicanos are restricted in their share of the benefits American society offers because they do not have the necessary level of intelligence; that is, because their knowledge of the specific structures directly related to educational attainment, and which promote equality in the Anglo-American consciousness, is limited (Berger, 1978).

The rather simple observation, however, that intelligence test scores and performance in school and at work, are closely associated has too often prompted intelligence test experts to conclude that the benefits of education and occupation are distributed on the basis of intelligence. This is clearly a questionable conclusion, and there is some evidence to suggest that it is false. For example, Bowles & Gintis (1976) demonstrate quite effectively that one's socioeconomic origin has a closer association with economic and occupational success than level of intelligence.

Similarly, studies of the educational decision-making process by which students are channeled into different types of academic programs show that a number of factors, such as the student's personal desires and aspirations, teachers' advice, grades, parental pressures, intelligence test scores, achievement test scores, and counselor assessments of academic ability, affect such educational decisions (Kirp, 1973; Schafer, et al., 1970; Gintis, 1972; Cicourel & Kitsuse, 1963). Other work within this general area has repeatedly demonstrated that whatever the precise factors figuring into decisions of this sort, the outcomes break down along social class and racial lines regardless of measured individual abilities (intelligence test scores and achievement test scores) (Levin, 1975; Tyack, 1976; Neelsen, 1975; Sewell, 1971; Carlssen, 1969). This type of evidence suggests that students are given different types of educational opportunities on the basis of racial and social class attributes and not so much because they have different levels of intelligence (Equality, 1969; Appleton, 1973).

More doubt is cast upon the observation that social benefits are distributed on the basis of intelligence when one examines the growing

body of literature that focuses on the relations between social class, intelligence, educational achievement, and occupational success. In a well known study, Jencks (1972) concludes that chance factors such as knowing the right people, or being in the right place at the right time, are more important in determining occupational success than is education. Also, Berg (1970) demonstrates that while increasingly higher levels of education are required to obtain many well-paying jobs, such levels of education are largely irrelevant when it comes to performing the job. Finally, Bowles & Gintis (1973) argue that while success tends to run in families, it does not do so because of any genetic inheritance of intelligence.

CONCLUSION

The association between quality of life and level of intelligence can be summarized as an Orwellian dictum: Intelligence is an attribute equally distributed among individuals, as are the social benefits American society has to offer. However, intelligence is an attribute more equally distributed among some than others, and consequently, some enjoy more social benefits than others. If Chicanos are shown to perform below normal expectations on measures of intelligence, and performance on such measures is closely associated with the quality of life one may enjoy, then Chicanos will be restricted in the enjoyment of those benefits American society has to offer. For Chicanos then, intelligence testing becomes both a political and social problem. By being instrumental in restricting their enjoyment of social benefits, it reinforces the popular social image that Chicanos are incapable of participating in and enjoying those social benefits (Aguirre, 1979).

Clearly, one of the restricted social benefits is the enjoyment of educational opportunity and attainment. Ideally, all Americans are assured of an equal opportunity to obtain as much education as possible. However, because intelligence tests have come to play a significant role in the ideology of educational opportunity, this ideal breaks down for Chicanos since they do not attain the same educational levels as those of the Anglo population (Olivas, 1979; Brown, et al., 1980). Consequently, this inequality of educational opportunity and attainment is largely perceived to be a reflection of the group's inability to further their education.

Regarding the Chicano's quality of life, one is led to believe that the role of intelligence testing is an ideological one. From our perspective, the ideology of intelligence testing is not just an explanation whose principal aim is to distort reality, but it is also the principal, and perhaps the only, explanation that justifies existing patterns of social conduct for the sake of their maintenance. As we have tried to demonstrate, the evidence concerning intelligence testing and this distribution of social benefits clearly show that differences in educational and occupational success in our society result more from social class and racial forces than from any attempts to promote equal opportunity on the basis of measured intelligence levels.

In brief, the ideology of intelligence testing, and the correspondent ideology of equal educational opportunity, are instrumental in justifying and maintaining current patterns of inequality by suggesting that Chicanos, and other who do not have an equal share of the American pie, are simply

not intelligent enough to secure such a share. Thus, attention is diverted away from the discriminatory practices, rooted in social class and ethnic forces, that remain the real causes of Chicano inequality and the limiting factors in their quality of life.

REFERENCES

Aguirre, A., Jr. Chicanos, intelligence testing, and the quality of life. Educational Research Quarterly, 1979, 4(1), 3-12.

Anderson, C. A. Equality of opportunity in a pluralistic society: A theoretical framework. International Review of Education, 1975, 21(3), 287-300.

Anderson, J. G., & Johnson, W. H. Stability and change among three generations of Mexican Americans: Factors affecting achievement. American Educational Research Journal, 1971, 8(2), 285-309.

Angelis, P. J. Language testing and intelligence testing: Friends and foes. 1977. (ERIC Document Reproduction Service No. ED 145 677).

Appleton, S. F. Comment: Alternative schools for minority students: The Constitution, the Civil Rights Act, and the Berkeley experiment. California Law Review, 1973, 61, 858-918.

Arce, C. H. Chicanos in higher education. Integrated Education, 1976, 14, 14-18.

Arce, C. H. Chicano participation in academia: A case of academic colonialism. Grito del Sol: A Chicano Quarterly, 1978, 3(1), 75-104.

Arvey, R. D. Some comments on culture fair tests. Personnel Psychology, 1972, 25, 433-448.

Bandura, A. Behavior theory and the models of man. American Psychologist, 1974, 29, 859-869.

Baratz, S. S., & Baratz, J. C. Early childhood intervention: The social science base of institutional racism. Harvard Educational Review, 1970, 40, 29-50.

Barrera, M. Race and class in the southwest. Notre Dame: Notre Dame University Press, 1979.

Bauernfeind, R. H. The four major fallacies of group IQ testing. School Counselor, 1971, 18(3), 156-163.

Beckwith, L. D. Constitutional requirements for standardized ability tests used in education. Vanderbilt Law Review, 1973, 26, 789-821.

Belth, M. The process of thinking. New York: David McKay, 1977.

Benson, R. Defining equality in education. Educational Studies, 1977, 8(2), 105-112.

Berg, I. Education and jobs. New York: Praeger, 1970.

Berger, B. A new interpretation of the IQ controversy. Public Interest, 1978, 50, 29-44.

Blair, P. M. Rates of return to education for Mexican Americans and European-Americans in Santa Clara County, California. Comparative Education Review, 1973, 17(1), 26-43.

Blake, D. A. Equal educational opportunity: Theory, practice, and policy. Theory Into Practice, 1973, 12, 54-58.

Blau, P., & Duncan, O. D. The American occupational structure. New York: Wiley, 1967.

Boli-Bennett, J., & Meyer, J. W. The ideology of childhood and the state. American Sociological Review, 1978, 43, 797-812.

Bordie, J. G. Language tests and linguistically different learners: The sad state of the art. Elementary English, 1970, 47, 814-828.

Boulding, K. E. The schooling industry as a possibly pathological section of the American economy. Review of Educational Research, 1972, 42(1), 129-143.

Boulding, K. E. Publicly supported, universally available education and equality. Phi Delta Kappan, 1976, 58(1), 36-41.

Bowles, S. Getting nowhere: Programmed class stagnation. Society, 1972, 9.

Bowles, S., & Gintis, H. IQ in the U. S. class structure. Social Policy, 1973, 3, 1-27.

Bowles, S., & Gintis, H. Capitalism and education in the United States. Socialist Revolution, 1975, 5, 101-138.

Bowles, S., & Gintis, H. Schooling in capitalist America. New York: Basic Books, 1976.

Bowles, S., & Nelson, V. The inheritance of IQ and the intergenerational reproduction of economic inequality. The Review of Economics and Statistics, 1974, 56(1), 39-51.

Brookover, W. B. Quality of educational attainment, standardized testing, assessment, and accountability. In C. Wayne Gordon (Ed.), Uses of the sociology of education: The seventy-third yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1974.

Brown, G. H., Rosen, N. L., Hill, S. T., & Olivas, M. A. The condition of education for Hispanic Americans. Washington, DC: National Center for Education Statistics, 1980.

Brown, F. Equal educational opportunity, the law, and the courts. Urban Review, 1976, 11(2), 135-150.

California Advisory Committee to the United States Commission on Civil Rights. Evaluation of educable mentally retarded programs in California. May, 1977.

Callahan, R. Education and the cult of efficiency. Chicago: University of Chicago Press, 1962.

Campbell, E. Q. Defining and attaining equal educational opportunity in a pluralistic society. Vanderbilt Law Review, 1973, 26, 461-486.

Carlson, K. Equalizing educational opportunity. Review of Educational Research, 1972, 42(4), 453-475.

Carlssen, G. Social mobility and class structure. Copenhagen: Lund Studies in Sociology, 1969.

Carnoy, M. Education as cultural imperialism. New York: Longman, 1974.

Casso, H. J. A descriptive study of three legal challenges for placing Mexican American and other linguistically and culturally different children into educably mentally retarded classes. Unpublished doctoral dissertation, University of Massachusetts, 1974.

Casso, H,. J., & Roman, G. D. Chicanos in higher education: Proceedings of a national institute on access to higher education for the Mexican American. Albuquerque: University of New Mexico Press, 1976.

Cauce, A. M., et al. The assessment of the intelligence of Latinos in the United States. Paper presented at the Interamerican Congress of Psychology, Miami Beach, December 1976. (ERIC Document Reproduction Service No. ED 150 456).

Cervantes, R. Problems and alternatives in testing Mexican American students. Integrated Education, 1974, 12(3), 33-37.

Chandler, J. T., & Plakos, J. Spanish-speaking pupils classified as educable mentally retarded. Integrated Education, 1969, 7(6), 28-33.

Chandler, J. T., & Plakos, J. An investigation of Spanish speaking pupils placed in classes for the educable mentally retarded. Journal of Mexican American Studies, 1970, 1(1), 58-63.

Christiansen, T., & Livermore, G. A comparison of Anglo American and Spanish American children on the WISC. Journal of Social Psychology, 1970, 81, 9-14.

Cicourel, A. W., & Kitsuse, J. I. The educational decision makers. Indianapolis: Bobbs-Merrill, 1963.

Clark, K. B., & Plotkin, L. A review of the issues and literature of cultural deprivation theory. In K. B. Clark (Ed.), The educationally deprived. New York: Metropolitan Applied Research Center, 1972.

Clark, S. M. Changing meanings of equal educational opportunity. Theory Into Practice, 1976, 15(1), 77-84.

Cleary, T. A., et al. Educational uses of tests with disadvantaged students. American Psychologist, January 1975, pp. 15-41.

Coleman, J. S. Equality of educational opportunity. Washington, DC: U.S. Office of Education, 1966.

Coleman, J. S. What is meant by "An Equal Educational Opportunity"? Oxford Review of Education, 1975, 1(1), 27-30.

Comer, J. P. The circle game in school tracking. Inequality in Education, 1972, 12, 23-27.

Cordasco, F. America and the quest for equal educational opportunity. British Journal of Educational Studies, 1973, 21(1), 50-63. (a)

Cordasco, F. The equality of educational opportunity. New Jersey: Littlefield, Adams, and Company, 1973. (b)

Cremin, L. Public education. New York: Basic Books, 1976.

Cronbach, L. J. Essentials of psychological testing (3rd ed.). New York: Harper, 1970.

Cronbach, L. J. Five decades of public controversy over mental testing. American Psychologist, 1971, 30, 1-14.

Cross, D. E., Long, M. A. & Ziajka, A. Minority cultures and education in the United States. Education and Urban Society, 1978, 10(3), 263-276.

DuBois, P. H. Increase in educational opportunity through measurement. In Educational change: Implications for measurement. Proceedings of the 1971 Invitational Conference on Testing Problems. Princeton, NJ: Educational Testing Service, 1972.

Environment, heredity and intelligence. Harvard Educational Review, 1969 (Reprint Series No. 2).

Equality of educational opportunity: Are compensatory programs constitutionally required. Southern California Law Review, 1969, 42, 142-168.

Eysenck, H. J. The IQ argument: Race, intelligence, and education. New York: The Library Press, 1971.

Feinberg, W. Educational equality under the conflicting models of educational development. Theory and Society, 1975, 2(2), 183-210.

Francis, N. C. Quality education and equality of educational opportunity. NASSP Bulletin, 1977, 61(409), 16-25.

Freire, P. Cultural action and conscientization. Harvard Educational Review, 1970, 40(3), 452-477.

Garcia, F. C. Chicano political experience: Three perspectives. Belmont, CA: Duxbury Press, 1977.

Garcia, J. IQ: The conspiracy. Psychology Today, September 1972, pp. 40; 42-43; 92; 94.

Garcia, J. The futility of comparative IQ research. In N. A. Buchwald & M. A. B. Brazier (Eds.), Brain mechanisms in mental retardation. New York: Academic Press, 1975.

Garcia, J. Intelligence testing: Quotients, quotas, and quackery. In Joe L. Martinez, Jr., (Ed.), Chicano psychology. New York: Academic Press, 1977.

Garretson, O. K. A study of causes of retardation among Mexican children in a small public school system in Arizona. Journal of Educational Psychology, 1928, 19(1), 31-40.

Gerken, K. C. Performance of Mexican American children on intelligence tests. Exceptional Children, 1978, 44, 438-443.

Ghiselli, E. E. The validity of occupational aptitude tests. New York: Wiley, 1966.

Gimon, A. T., et al. Applicability of learning potential measurement with Spanish-speaking youth as an alternative to IQ: Final report. (ERIC Document Reproduction Service No. ED 109 216).

Gintis, H. Toward a political economy of education: A radical critique of Ivan Illich's Deschooling Society. Harvard Educational Review, 1972, 42(1), 70-96.

Glazer, N. Affirmative discrimination: Ethnic inequality and public policy. New York: Basic Books, 1978.

Glickstein, H. A. Equal educational opportunity: The state of the law. Harvard Law Journal, 1977, 20(1), 100-127.

Goldman, R. D., & Hartig, L. K. The WISC may not be a valid predictor of school performance for primary-grade minority children. American Journal of Mental Deficiency, 1976, 80(6), 583-587.

Goldman, R. D., & Widawski, M. H. An analysis of types of errors in the selection of minority college students. Journal of Educational Measurement, 1976, 13(3), 185-200.

Goldman, R. D., & Hewitt, B. N. An investigation of test bias for Mexican-American college students. Journal of Educational Measurement, 1975, 12(3), 187-196.

Gonzalez, G. Language, culture, and exceptional children. Exceptional Children, 1974, 40(8), 565-570.

Goodenow, R. K. The progressive educator, race, and ethnicity in the depression years: An overview. History of Education Quarterly, 1975, 15(4), 365-394.

Goslin, D. The school in contemporary society. Palo Alto: Scott, Foresman and Company, 1965.

Goslin, D. A., & Glass, D. C. The social effects of standardized testing in American elementary and secondary school. Sociology of Education, 1967, 40(2), 115-131.

Gossett, T. F. Race: The history of an idea in America. Dallas: Southern Methodist University Press, 1963.

Green, P. Race and IQ: Fallacy and heritability. Dissent, Spring 1976, pp. 181-196. (a)

Green, P. The pseudoscience of Arthur Jensen. Dissent, Summer 1976, pp. 284-297. (b)

Green, P. IQ and the future of equality. Dissent, Fall 1976, pp. 398-414. (c)

Green, P. Myths of hereditarianism. Dissent, Summer 1977, pp. 301-306.

Guerra, M. H. The retention of Mexican American students in higher education with special reference to bicultural and bilingual problems. Paper presented at the Conference on Increasing Opportunities for Mexican American Students in Higher Education, Long Beach, May, 1969. (ERIC Document Reproduction Service No. ED 031 324).

Havighurst, R. J. Minority sub-culture and the law of the effect. American Psychologist, 1970, 25, 313-322.

Henderson, R. W., & Rankin, R. J. WPPSI reliability and predictive validity with disadvantaged Mexican-American children. Journal of School Psychology, 1973, 11(1), 16-20.

Henning, M. M. Excellence and equality in American education. ETC: A Review of General Semantics, 1969, 26(4), 447-456.

Hernandez, N. G. Variables affecting achievement of middle school Mexican American students. Review of Educational Research, 1973, 43(1), 1-39.

Herrnstein, R. IQ in the meritocracy. Boston: Little, Brown, 1973.

Hodges, H. M. Underdogs, middle Americans, and elites: Structured inequality in the United States. Morristown, NJ: General Learning Press, 1976.

Holland, W. R. Language barrier as an educational problem of Spanish-speaking children. Exceptional Children, 1960, 27, 42-50.

Hollingshead, A. B. Elmtown's youth. New York: Wiley, 1949.

Inglehart, B. The immigrant child and the American school. Ethnicity, 1976, 3, 34-52.

Jencks, C. Heredity, environment, and public policy reconsidered. American Sociological Review, 1980, 45, 723-736.

Jencks, C. Inequality: A reassessment of the effect of family and schooling in America. New York: Basic Books, 1972.

Jensen, A. Genetics and education. New York: Harper & Row, 1972.

Jensen, A. How much can we boost IQ and scholastic achievement? Harvard Educational Review, 1969, 39, 1-23.

Kamin, L. J. The science and politics of IQ. Potomac, MD: Erlbaum, 1974.

Kamin, L. J. Social and legal consequences of IQ tests or classification instruments: Some warnings from our past. Journal of School Psychology, 1975, 13(4), 317-322.

Karier, C. J. Testing for order and control in the corporate liberal state. Educational Theory, 1972, 22(2), 154-180.

Katz, M. The irony of early school reform. Boston: Beacon, 1970.

Katz, M. Class, bureaucracy, and schools. New York: Praeger, 1971.

Kazamias, A. M. Meritocracy and isocracy in American education. The Educational Forum, 1961, 25(3).

Kelly, M. E. & McConnochie, K. R. Compensatory education: A subtle form of racism? Australian Journal of Education, 1974, 18(1), 30-49.

Keniston, F. All our children: The American family under pressure. New York: Harcourt, Brace, Jovanovich, 1977.

Keogh, B. K., & Barkett, C. J. Children's rights in assessment and school placement. Journal of Social Issues, 1978, 34(2), 87-100.

Keston, M. J., & Jimenez, C. A study of the performance on English and Spanish editions of the Stanford-Binet intelligence test by Spanish-American children. Journal of Genetic Psychology, 1954, 85(2), 263-269.

Kidd, A. H. The culture-fair aspects of Cattell's test of g: Culture free. Journal of Genetic Psychology, 1962, 101, 343-364.

Kirp, D. L. Schools as sorters: The constitutional and policy implications of student classification. University of Pennsylvania Law Review, 1973, 121, 705-797.

Kirp, D. L. Student classification, public policy, and the courts. Harvard Educational Review, 1974, 44, 7-52.

Kohl, D. H. The IQ game: Bait and switch--A review essay. School Review, 1976, 84, 572-604.

Kurland, P. B. Equal educational opportunity: The limits of constitutional jurisprudence undefined. University of Chicago Law Review, 1968, 35, 583-600.

Lavandowski, B. The difference in intelligence test scores of bilingual students on an English version of the intelligence test as compared to a Spanish version of the test. Illinois School Research, 1975, 11(3), 47-51.

Legal implications of the use of standardized ability tests in employment and education. Columbia Law Review, 1968, 68 (4), 691-744.

Levin, B. Recent developments in the law of equal educational opportunity. Journal of Law and Education, 1975, 4(3), 411-447.

Levin, H. M. Education, life chances, and the courts: The role of social science evidence. Law and Contemporary Problems, 1975, 39(2), 217-240.

Levine, M. The academic achievement test: Its historical context and social functions. American Psychologist, 1976, 31, 228-238.

Light, R. J., & Smith, P. V. Social allocation models of intelligence: A methodological inquiry. Harvard Educational Review, 1969, 39(3), 484-510.

Loehlin, J. C., Lindzey, G., & Spuhler, J. N. Race differences in intelligence. San Francisco: W.H. Freeman & Company, 1975.

Lynd, R. S., & Lynd, H. M. Middletown: A study in American culture. New York: Harcourt, Brace and World, 1929.

Lynd, R. S., & Lynd, H. M. Middletown in transition. New York: Harcourt, Brace, and World, 1937.

Madrid-Barela, A., Macias, R. F., & Lopez, R. W. Chicanos in higher education: Status and issues. (Monograph No. 7). UCLA: Chicano Studies Center, 1976.

Mahakian, C. Measuring intelligence and reading capacity of Spanish-speaking children. Elementary School Journal, 1939, 39(10), 760-768.

Manuel, H. T., & Hughes, L. S. The intelligence and drawing ability of young Mexican children. Journal of Applied Psychology, 1932, 16(4), 382-387.

March, J. Model bias in social action. Review of Educational Research, 1972, 42(4), 413-429.

Marks, R. Race and immigration: The politics of intelligence testing. In C. Karier (Ed.), Shaping the American educational state. New York: Free Press, 1975.

Marks, R. Providing for individual differences: A history of the intelligence testing movement in North America. Interchange, 1976-1977, 7(3), 3-16.

McNemar, Q. Lost: Our intelligence? Why? American Psychologist, 1964, 19, 871-882.

Mercer, J. R. Current retardation procedures and the psychological and social implications on the Mexican American. Albuquerque: Southwestern Cooperative Educational Laboratory, 1970.

Mercer, J. R. Institutionalized anglocentrism: Labeling mental retardates in the public schools. In P. Orleans & W. Russess (Eds.), Race, change, and urban society. Los Angeles: Sage, 1971.

Mercer, J.R. Sociocultural factors in labeling mental retardates. Peabody Journal of Education, 1971, 48(3), 188-203.

Mercer, J. R. IQ: The lethal label. Psychology Today, 1972, 6(4), 44; 46-47; 95-96.

Mercer, J. R. Crosscultural evaluation of exceptionality. Focus on Exceptional Children, 1973, 5(4), 8-15.

Mercer, J. R. Pluralistic diagnosis in the evaluation of Black and Chicano children: A procedure for taking sociocultural variables into account in clinical assessment. In C. A. Hernandez, & N. Wagner (Eds.), Chicanos: Social and psychological perspectives. St. Louis: Mosby, 1976.

Mercer, J. R. Implications of current assessment procedures for Mexican American children. California State University, Los Angeles: National Dissemination and Assessment Center, 1977.

Mercer, J. R., & Smith, J. M. Subtest estimates of the WISC full scale IQs for children. Rockville, MD: National Center for Health Statistics, 1972.

Meyer, J., & Rubinson, R. Education and political development. In Fred Kerlinger (Ed.), Review of research in education. Itasca: F. E. Peacock, 1975.

Miller, S. M., & Ratner, S. The American resignation: The new assault on equality. Social Policy, 1972, 3(1), 5-15.

Mitchell, A. J. The effect of bilingualism in the measurement of intelligence. Elementary School Journal, 1937, 38(1), 29-37.

Mosteller, F., & Moynihan, P. (Eds.). On equality of educational opportunity. New York: Random House, 1972.

Mycue, E. Testing in Spanish and the subsequent measurement of English fluency. 1968. (ERIC Document Reproduction Service No. ED 026 193).

National Institute of Education. Desegregation and education concerns of the Hispanic community. Washington, DC: National Institute of Education, 1977.

Neelson, P. Education and social mobility. Comparative Education Review, 1975, 19(1), 129-143.

Newland, T. E. Assumptions underlying psychological testing. Journal of School Psychology, 1973, 11, 316-322.

Olivas, M. The dilemma of access. Washington, DC: Howard University Press, 1977.

Oliveira, A. L. Barrio test of verbal abilities (Form A). Educational Leadership, 1972, 30(2), 169-170.

Oller, J. W. How important is language proficiency to IQ and other educational tests? 1977. (ERIC Document Reproduction Service No. ED 144 394).

Olmedo, E. L. Psychological testing and the Chicano: A reassessment. In Joe L. Martinez, Jr. (Ed.), Chicano psychology. New York: Academic Press, 1977.

Padilla, A. M. Critical factors in the testing of Hispanic Americans: A review and some suggestions for the future. In R. W. Tyler & S. H. White (Eds.), Testing, teaching, and learning: Report of a conference on research on testing, August 17-26, 1979.

Padilla, A. M., & Garza, B. M. IQ tests: A case of cultural myopia. National Elementary Principal, 1975, 54(4), 53-58.

Padilla, A. M., & Ruiz, R. A. Latino mental health. Rockville, MD: National Institute of Mental Health, 1973.

Palmer, M., & Gaffney, P. D. Effects of administration of the WISC in Spanish and English and relationship of social class to performance. Psychology in the Schools, 1972, 9(1), 61-64.

Parsons, T. The school class as a social system: Some of its functions in American society. Harvard Educational Review, 1959, 29(4), 297-318.

Philippus, M. J. Test prediction of school success of bilingual Hispano American children. 1967. (ERIC Document Reproduction Service No. ED 036 577.

Phillips, J. The effects of examiner and the testing situation upon the performance of culturally deprived children, phase 1. 1966. (ERIC Document Reproduction Service No. ED 011 963).

Popenoe, P. Sterilization of human betterment. New York: MacMillan, 1930.

Puglisi, D. J. Children on the periphery of the melting pot. Contemporary Education, 1974, 46(1), 19-22.

Raggatt, P. Equality of educational opportunity for minority group students: Participants and policies 1954-71. Comparative Education, 1976, 12(1), 45-53.

Ravitch, D. On the history of minority group education in the United States. Teachers College Record, 1976, 78 (2), 213-228.

Riegle, R. In defense of IQ testing. Educational Studies, 1977, 8 (2), 113-121.

Rincon, E. Comparison of the cultural bias of the KIT:EXP with the WISC using Spanish surname children differing in language spoken. Educational and Psychological Measurement, 1976, 36 (4), 1037-1041.

Robertson, D. F. Examining the examiners: The trend toward truth in testing. Journal of Law and Education, 1980, 9(2), 167-199.

Romero, D. The impact and use of minority faculty within a university. Paper presented at the annual meeting of the American Psychological Association, August 1977, San Francisco.

Roos, P. A. Questioning of the stereotypes: Differentials in income attainment of Japanese, Mexican-Americans, and Anglos in California. Paper presented at the annual meeting of the American Sociological Association, September 1977, Chicago. (ERIC Document Reproduction Service No. ED 148 651).

Rose, H., & Rose, S. The IQ myth. Race & Class, 1978, 20 (1), 63-74.

Salazar, R. Stranger in one's land. (Publication No. 19). U. S. Commission on Civil Rights, May 1970.

Samuda, R. J. Racial discrimination through mental testing: A social critic's point of view. IRCD Bulletin, May 1973 (No. 42).

Samuda, R. J. Psychological testing of American minorities: Issues and consequences. New York: Harper & Row, 1975.

Sanchez, D. J. Equal opportunity -- For the Spanish speaking American. Educational Forum, 1972, 36 (3), 383-387.

Sanchez, G. I. Group differences and Spanish-speaking children: A critical review. Journal of Applied Psychology, 1932, 16(3), 549-558. (a)

Sanchez, G. I. Scores of Spanish-speaking children on repeated tests. Journal of Genetic Psychology, 1932, 40(1), 223-231. (b)

Sanchez, G. I. Bilingualism and mental measures. Journal of Applied Psychology, 1934, 18(6), 765-772.

Sanday, P. R. On the causes of IQ differences between groups and implications for social policy. Human Organization, 1972, 31(4), 411-424.

Sattler, J. M. Racial "experimenter effects" in experimentation, testing, interviewing, and psychotherapy. Psychological Bulletin, 1970, 73(2), 137-160.

Scarr-Salapatek, S. Unknowns in the IQ equation. Science, 1971, 174, 1223-1228. (a)

Scarr-Salapatek, S. Race, social class, and IQ. Science, 1971, 174, 1285-1295. (b)

Schafer, W. E., Olexa, C., & Polk, K. Programmed for social class: Tracking in high school. Transaction, October 1970, pp. 39-46; 63.

Sewell, W. Inequality of opportunity for higher education. American Sociological Review, 1971, 36, 793-869.

Shanks, H. Equal education and the law. American Scholar, 1970, 39, 255-269.

Shea, T. E. An educational perspective in the legality of intelligence testing and ability grouping. Journal of Law and Education, 1977, 6(2), 137-158.

Sheldon, W. H. The intelligence of Mexican children. School and Society, 1924, 19, 139-142.

Shotwell, A. M. Arthur performance ratings of Mexican and American high grade mental defectives. American Journal of Mental Deficiency, 1945, 49(4), 445-449.

Silverstein, A. E., Shotwell, A. M., & Fisher, G. M. Intellectual functioning of the mentally retarded. American Journal of Mental Deficiency, 1962, 67, 369-401.

Smith, M. W. Alfred Binet's remarkable questions: A cross-national and cross-temporal analysis of the cultural biases built into the Standord-Binet Intelligence Scale and other Binet tests. Genetic Psychology Monographs, 1974, 89, 307-334.

Sorenson, A. Equality of educational opportunity in an expanding educational system. Acta Sociologia, 1971, 14(3), 151-161.

Sorgen, M. S. Testing and tracking in public schools. Hastings Law Journal, 1973, 24, 1129-1190.

Spring, J. Psychologists and the war: The meaning of intelligence in the Alpha and Beta tests. History of Education Quarterly, 1972, 12(1), 3-15.

Spring, J. The sorting machine -- National educational policy since 1945. New York: David McKay, 1976.

Strong, K. E. War, psychology, and education. School and Society, 1919, 9, 697-705.

Swanson, E., & DeBlassie, R. R. Interpreter effects on the WISC performance of first grade Mexican American children. Measurement and Evaluation in Guidance, 1971, 4(3), 172-175.

Taebel, D. Minority representation on city councils: The impact of structure on Blacks and Hispanics. Social Science Quarterly, 1978, 59(1), 142-152.

TenHouten, W. D., et al. School ethnic composition, social contexts, and educational plans of Mexican American and Anglo high school students. American Journal of Sociology, 1971, 77(1), 89-107.

Terman, L. M. The significance of intelligence tests. Journal of Psycho-Asthenics, 1914, 18, 119-127.

Terman, L. M. Intelligence tests and social reorganization. New York: World, 1923.

Terman, L. M. Genetic studies of genius. Stanford: Stanford University Press, 1925.

Terman, L. M. The independent study plan at Stanford University. School and Society, 1926, 24, 96-98.

Thomas, A. M., Hertzig, I. D., & Fernandez, P. Examiner effect in IQ testing of Puerto Rican working-class children. Journal of American Orthopsychiatry, 1971, 41, 809-821.

Thomas, P. J. Administration of a dialectical Spanish version and standard English version of the Peabody Picture Vocabulary Test. Psychological Reports, 1977, 40(3), 747-750.

Thornburg, H. D., & Grinder, R. E. Children of Aztlan: The Mexican-American experience. In R. J. Havighurst & P. H. Dreyer (Eds.), Youth: The seventy-fourth yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1975.

Thorndike, E. L. Intelligence and its uses. Harper's, January 1920.

Thorndike, E. L. Human nature and the social order. New York: MacMillan, 1940.

Thurow, L. C. Education and economic equality. Public Interest, 1972, 28, 66-81.

Thurow, L. C. Problems without solutions: Solutions without problems. In N. F. Ashline (Ed.), Education, inequality, and national policy. Lexington: Lexington Books, 1976.

Tyack, D. B. Ways of seeing: An essay on the history of compulsory schooling. Harvard Educational Review, 1976, 46(3), 355-389.

U. S. Commission on Civil Rights. Toward quality education for Mexican Americans. Washington, DC: U. S. Government Printing Office, 1974.

U. S. Commission on Civil Rights. Affirmative action in employment in higher education. Washington, DC: U. S. Government Printing Office, 1975.

U. S. Commission on Civil Rights. Social indicators of equality for minorities and women. Washington, DC: U. S. Government Printing Office, 1978.

Valverde, L. A., & Brown, F. Equal educational opportunity and bilingual-bicultural education: a socioeconomic perspective. Education and Urban Society, 1978, 10(3), 277-294.

Vasquez, J. Measurement of intelligence and language differences. Aztlan, 1972, 3(1), 155-163.

Warner, W. L., et al. Democracy in Jonesville. New York: Harper and Brothers, 1949.

Warner, W. L., & Lunt, P. S. The social life of a modern community. New Haven: Yale University Press, 1941.

White, S. H. Social implications of IQ. National Elementary Principal, 1975, 54(4), 4-14.

Yoakum, C. S., & Yerkes, R. M. (Eds.). Army mental tests. New York, 1920.

Yudof, M. G. Equal educational opportunity and the courts. Texas Law Review, 1973, 51(3), 411-504.

Ziegler, H., & Peak, W. The political function of the educational system. Sociology of Education, 1970, 43(2), 115-142.

Zigler, E., & Trickett, P. K. IQ, social competence, and evaluation of early childhood intervention programs. American Psychologist, September 1978, pp. 789-798.

Zirkel, P. A. Spanish-speaking students and standardized tests. The Urban Review, 1972, 5, 32-40.

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AN ESSAY IN SOCIAL INEQUALITY

by

Adalberto Aguirre, Jr.

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